

WHAT IS CLAIMED IS:

1. A fixing device comprising:

induction heating means having coil bobbins each wound with a wire which forms a coil, and a holding member which holds the plurality of coil bobbins at predetermined positions; and

a target heating member which generates heat by an eddy current generated upon a change in a magnetic field generated by the coil of the induction heating means,

wherein the coil bobbin has a shape with which an interval between coils wound around adjacent coil bobbins is held at a predetermined interval in a state in which the coil bobbin is held by the holding member.

2. A device according to claim 1, wherein on the coil bobbin, the interval between coils wound around adjacent coil bobbins in the state in which the coil bobbin is held by the holding member is so set as to adjust to not more than a predetermined value a temperature on the target heating member heated by the coils.

3. A device according to claim 1, wherein the coil bobbin has guides which regulate two ends of the coil, and

a width between the guides is so set as to hold at a predetermined interval the interval between coils wound around adjacent coil bobbins in the state in

which the coil bobbin is held by the holding member.

4. A device according to claim 1, wherein the coil bobbins have projections which adjust an interval between coils, on adjacent surfaces of adjacent coil bobbins in the state in which the coil bobbin is held by the holding member.

5. A device according to claim 1, wherein the holding member has by compression molding a shape with which the holding member is fitted in an inner shape of the coil bobbin, and

the coil bobbin is molded by injection molding.

6. A device according to claim 5, wherein the coil bobbin and the holding member are formed using the same material.

7. A device according to claim 5, wherein the coil bobbin and the holding member are molded using materials having thermal expansion coefficients whose difference falls within a predetermined allowable range.

8. A device according to claim 1, wherein the coil bobbin is formed into a hollow cylinder, and

at least one coil bobbin out of the plurality of coil bobbins has an outer diameter different from an outer diameter of the remaining coil bobbins.

9. A device according to claim 1, wherein at least one coil bobbin out of the plurality of coil

bobbins has the number of turns different from the number of turns of the remaining coil bobbins.

10. A device according to claim 8, wherein coils wound around at least two coil bobbins having different  
5 outer diameters are connected to constitute one circuit.

11. A device according to claim 9, wherein coils wound around at least two coil bobbins having the same number of coil turns out of the coil bobbins are  
10 connected to constitute one circuit.

12. A device according to claim 3, wherein the guides are respectively arranged at the two ends of the coil holding member, and

the width between the guides is set to not less  
15 than a value obtained by multiplying a sum of a diameter of the wire and an error range of the diameter of the wire by a sum of the number of turns of the wire and one.

13. A device according to claim 3, wherein  
20 the coil is formed by a single wire covered with an insulating member, and

the guides are so set as to adjust a distance between facing outermost coils of two adjacent coil bobbins to not less than  $1/2$  of a diameter of the  
25 single wire.

14. A device according to claim 3, wherein guides of adjacent coil bobbins are so constituted as to be

arranged at positions different from each other.

15. A device according to claim 14, wherein the guides arranged at the different positions prevent a coil wound around a coil bobbin from coming into  
5 contact with a coil wound around another coil bobbin.

16. A fixing device comprising:

a holding body whose outer surface is wound with a coil which generates a magnetic field by supplying a voltage and a current at a predetermined frequency;

10 a heating member which has a hollow cylindrical shape or an endless belt shape and is so positioned as to generate an eddy current corresponding to the magnetic field provided by the coil;

a flange which is arranged at a predetermined  
15 portion on the outer surface of the holding body and keeps a distance between the coil and the heating member constant;

a power supply device which supplies a voltage and a current of a predetermined frequency to the coil; and

20 a press member which is so arranged as to hold a predetermined pressure between the press member and the heating member.

17. A device according to claim 16, wherein the flange is arranged on at least one end of the holding  
25 body.

18. A device according to claim 16, wherein the flange serves as a guide which regulates movement of

the coil wound around the holding body.

19. A device according to claim 16, wherein the  
flange contacts the heating member at a position where  
the flange faces the press member via at least the  
5 heating member.